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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/557,525	11/18/2005	Djurre Hans Zijsling	TS6443 US	8725
23632	7590	08/31/2007		
SHELL OIL COMPANY P O BOX 2463 HOUSTON, TX 772522463			EXAMINER COLLINS, GIOVANNA M	
			ART UNIT 3672	PAPER NUMBER
			MAIL DATE 08/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/557,525

Applicant(s)

ZIJSLING, DJURRE HANS

Examiner

Giovanna M. Collins

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3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

The drawings filed 6/8/07 are accepted by the examiner.

The amended Abstract filed 6/8/07 is accepted by the examiner.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4,6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over British Patent 2320270 Armell et al. in view of Strang 2238377.

Referring to claims 1-4 and 9, Armell discloses (fig. 1) a drill bit for drilling a borehole in an earthen formation, the drill bit having a central longitudinal axis and comprising a bit body (at 10) provided with a central shank (12) for connecting the drill bit to a drilling system, the drill bit further comprising at least one cutting arm (14,15), each cutting arm being provided with a set of cutters (34,36,37) for cutting the object and being coupled to the bit body via pivot means (at 28) allowing the cutting arm to pivot between a radially retracted position (see fig. 7a) and a radially expanded position (see fig. 7c). Armell does not disclose support means to support the drill bit in the expanded position. Strang teaches a the drill bit being provided with support means (at 9 and 10) for supporting a cutting arm in the radially expanded position thereof and the support means is arranged to transmit at a majority of the rotational torque and axial loads generated during drilling from a cutting arm to the bit

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body and support the radially compressive loads. Armell teaches the support means helps to relieve pivot pin of excessive loads (col. 1, lines 46-49). As it would be advantageous to relieve the pivot pin of excessive loads, it would be obvious to one of ordinary skill in the art at the time of the invention to modify the drill bit disclosed by Armell to have a support means arranged to transmit axial and rotation torque from the cutting arms to the bit body in view of the teachings of Strang.

Referring to claims 6-8, Armell discloses a pilot section (38) provided with pilot cutters arranged for pre-cutting a pilot borehole ahead of the cutting arm and the pilot section is movable with respect to the shank and is and coupled to the cutting arm and to a hydraulic system (see fig. 1, and fig 4, pilot 38 is connected to piston 16 which moves axially in the shank 12 in response to fluid pressure (hydraulic system) in the shank and pivot (28) connects pilot to cutting arms (14,15).

Response to Arguments

3. Applicant's arguments with respect to claims 1-4 and 6-9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna M. Collins whose telephone number is 571-272-7027. The examiner can normally be reached on 6:30-3 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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Technology Center 3670